

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
GORDON E. NELSON  
57 CENTRAL STREET, P.O. BOX 782  
ROWLEY, MA 01969

## PCT

REC'D 06 MAR 2006

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference

MEDIAS01.022

Date of mailing  
(day/month/year)

01 MAR 2006

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US05/00201

International filing date (day/month/year)

06 January 2005 (06.01.2005)

Priority date (day/month/year)

06 January 2004 (06.01.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G06F 7/04,17/30;G06K 9/00 and US Cl.: 726/32

Applicant

MEDIASEC TECHNOLOGIES, GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

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For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Date of completion of this opinion

01 February 2006 (01.02.2006)

Authorized officer

Ayaz Sheikh

James R. Matthews  
Telephone No. (571) 272-3795

Form PCT/ISA/237 (cover sheet) (April 2005)

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US05/00201

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

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- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

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INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US05/00201

**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-54</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-54</u>	NO
Industrial applicability (IA)	Claims <u>1-54</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and explanations:**

Please See Continuation Sheet

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

**V. 2. Citations and Explanations:**

Claims 1-54 lack novelty under PCT Article 33(2) as being anticipated by Zeller et al., (U.S. Publication 2003/0156733 and Zeller hereinafter).

Regarding claims 1-19 and 40-41, Zeller discloses a method of creating a digital authentication pattern that contains a message, the digital authentication pattern belonging to a digital representation and the method comprising the steps of: Selecting sets of pattern elements belonging to the digital authentication pattern to carry message elements of the message, and for each selected set, setting the values of the pattern elements in the set to carry the message element such that the digital authentication pattern's ability to detect copying remains substantially unchanged (Par. 0029-0047).

Regarding claims 20-39 and 52, Zeller discloses a method of reading a message whose values have been inserted into sets of pattern elements in a digital authentication pattern belonging to a digital representation, the method comprising the steps of:

Selecting sets of pattern elements belonging to the digital authentication pattern that carry message elements of the message, and for each selected set, comparing the set with equivalent sets that have a possible value of the message element to determine the value of the message element in the selected set (Par. 0115-0160).

Regarding claim 42, Zeller discloses a method of determining whether an analog form that includes a copy detection pattern is an original analog form, the method comprising the steps of:

Scanning the copy detection pattern to produce a digital representation thereof, and using one or more global properties of the digital representation of the scanned copy detection pattern to make at least a preliminary determination of whether the analog form is an original analog form, the preliminary determination being made without reference to a digital representation of the original of the analog form's copy detection pattern (Par. 0033-0047).

Regarding claim 43, Zeller discloses a method of determining a copying relationship between digital representations, each of the digital representations including a portion that is sensitive to alteration produce by a copying process and the method comprising the steps of:

Modifying a portion to make the portion more comparable with the other portion by taking the alterations into account, and comparing the portions to determine the copying relationship (Par. 0094-0106).

Regarding claim 44-51, Zeller discloses a visual authentication pattern for a document, the visual authentication pattern having high entropy and being sensitive to the effects of print and scan operations and being characterized in that: the visual authentication pattern is subdivided into units which are distributed across the document (Par. 0029-0047).

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Regarding claim 53, Zeller discloses a digital representation of an analog signal, the digital representation being characterized in that: the digital representation of a copy detection signal that is sensitive to transformations produced by digital-to-analog and analog-to-digital conversions whereby the representation of the copy detection signal may be used to determine whether another digital representation of the analog signal was made by digitizing an analog signal produced from the digital representation (Par. 0189-0198).

Regarding claim 54, Zeller discloses a digital representation characterized in that: the digital representation includes a first portion wherein the data has error correction and second portion wherein the data has no error correction and the data is sensitive to alterations produced by the process of making a digital copy of the digital representation, whereby the second portion may be used to determine a copy relationship between a digital representation and another digital representation (Par. 0141-0159).

# PATENT COOPERATION TREATY

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## PCT

REC'D 06 MAR 2006

WIPO PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference  <b>MEDIAS01.022</b>		Date of mailing (day/month/year) <b>01 MAR 2006</b> <b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No.	International filing date (day/month/year)	Priority date (day/month/year)	
PCT/US05/00201	06 January 2005 (06.01.2005)	06 January 2004 (06.01.2004)	
International Patent Classification (IPC) or both national classification and IPC			
IPC(7): G06F 7/04, 17/30; G06K 9/00 and US Cl.: 726/32			
Applicant			
MEDIASEC TECHNOLOGIES, GMBH			

1. This opinion contains indications relating to the following items:

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☐ Box No. VIII      Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

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3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 01 February 2006 (01.02.2006)	Authorized officer for Ayaz Sheikh <i>James R. Matthews</i> Telephone No. (571) 272-3795
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Form PCT/ISA/237 (cover sheet) (April 2005)

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International application No.

PCT/US05/00201

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

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☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

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4. Additional comments:

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International application No.  
PCT/US05/00201

**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-54</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-54</u>	NO
Industrial applicability (IA)	Claims <u>1-54</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and explanations:**

Please See Continuation Sheet



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In case the space in any of the preceding boxes is not sufficient.

**V. 2. Citations and Explanations:**

Claims 1-54 lack novelty under PCT Article 33(2) as being anticipated by Zeller et al., (U.S. Publication 2003/0156733 and Zeller hereinafter).

Regarding claims 1-19 and 40-41, Zeller discloses a method of creating a digital authentication pattern that contains a message, the digital authentication pattern belonging to a digital representation and the method comprising the steps of: Selecting sets of pattern elements belonging to the digital authentication pattern to carry message elements of the message, and for each selected set, setting the values of the pattern elements in the set to carry the message element such that the digital authentication pattern's ability to detect copying remains substantially unchanged (Par. 0029-0047).

Regarding claims 20-39 and 52, Zeller discloses a method of reading a message whose values have been inserted into sets of pattern elements in a digital authentication pattern belonging to a digital representation, the method comprising the steps of:

Selecting sets of pattern elements belonging to the digital authentication pattern that carry message elements of the message, and for each selected set, comparing the set with equivalent sets that have a possible value of the message element to determine the value of the message element in the selected set (Par. 0115-0160).

Regarding claim 42, Zeller discloses a method of determining whether an analog form that includes a copy detection pattern is an original analog form, the method comprising the steps of:

Scanning the copy detection pattern to produce a digital representation thereof, and using one or more global properties of the digital representation of the scanned copy detection pattern to make at least a preliminary determination of whether the analog form is an original analog form, the preliminary determination being made without reference to a digital representation of the original of the analog form's copy detection pattern (Par. 0033-0047).

Regarding claim 43, Zeller discloses a method of determining a copying relationship between digital representations, each of the digital representations including a portion that is sensitive to alteration produce by a copying process and the method comprising the steps of:

Modifying a portion to make the portion more comparable with the other portion by taking the alterations into account, and comparing the portions to determine the copying relationship (Par. 0094-0106).

Regarding claim 44-51, Zeller discloses a visual authentication pattern for a document, the visual authentication pattern having high entropy and being sensitive to the effects of print and scan operations and being characterized in that: the visual authentication pattern is subdivided into units which are distributed across the document (Par. 0029-0047).

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Regarding claim 53, Zeller discloses a digital representation of an analog signal, the digital representation being characterized in that: the digital representation of a copy detection signal that is sensitive to transformations produced by digital-to-analog and analog-to-digital conversions whereby the representation of the copy detection signal may be used to determine whether another digital representation of the analog signal was made by digitizing an analog signal produced from the digital representation (Par. 0189-0198).

Regarding claim 54, Zeller discloses a digital representation characterized in that: the digital representation includes a first portion wherein the data has error correction and second portion wherein the data has no error correction and the data is sensitive to alterations produced by the process of making a digital copy of the digital representation, whereby the second portion may be used to determine a copy relationship between a digital representation and another digital representation (Par. 0141-0159).

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Date of completion of this opinion

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Authorized officer

Ayaz Sheikh

James R. Matthews  
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**Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

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	Claims <u>1-54</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-54</u>	NO
Industrial applicability (IA)	Claims <u>1-54</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and explanations:**

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**WRITTEN OPINION OF THE  
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